

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Aluminum Sulfate 50%

Synonyms: Liquid Alum, Dialuminum Trisulfate, Aluminum Sulfate

CAS Number: 10043-01-3

Grade/Purity: Technical

Product Type: Salts

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer/Supplier: Alliance Chemical, 204 South Edmond St, Taylor, Texas 76574

Information: 512-365-6838 | www.alliancechemical.com

Emergency: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

Signal Word: Danger

GHS Pictograms:



Hazard Statements:

H290	May be corrosive to metals
H318	Causes serious eye damage
H335	May cause respiratory irritation

Precautionary Statements:

P234	Keep only in original packaging.
P260	Do not breathe dust, fume, gas, mist, vapours or spray.
P261	Avoid breathing dust, fume, gas, mist, vapours or spray.
P264	Wash hands and face thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing, and eye/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents and container in accordance with local, regional, national, and international regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	% MIN	% MAX	CAS #	EINECS# / ELINCS#	FORMULA	MOLECULAR WEIGHT
Aluminum Sulfate	50	50	10043-01-3	233-135-0	Al ₂ O ₁₂ S ₃	342.2 g/mol
Water	50	50	7732-18-5	231-791-2	H ₂ O	18.02 g/mol

4. FIRST-AID MEASURES

Eyes	EYES: flush with water for at least 15 min.
Skin	Rinse skin with plenty of water or shower.
Inhalation	INHALATION: rinse nose and mouth with water.
Ingestion	INGESTION: give large amounts of water.

5. FIRE-FIGHTING MEASURES

Suitable Media	Dry chemical, CO2, water spray. Use water spray to cool containers.
Unsuitable Media	Do not use a solid water stream as it may scatter and spread fire.
Protective Equipment	Wear self-contained breathing apparatus and full protective clothing.
Combustion Products	May include carbon oxides and other toxic fumes. See Section 10.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental	Prevent leakage or spillage from entering drains, sewers, or waterways.
Containment & Cleanup	Absorb with inert material. Collect in appropriate waste container. Dispose per applicable regulations.

7. HANDLING AND STORAGE

Safe Handling	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
Safe Storage	Store in a cool, dry, well-ventilated area. Use corrosion-resistant containers. Keep away from incompatible materials (see Section 10). Keep containers tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.

Occupational Exposure Limits:

AGENCY	EXPOSURE LIMIT
OSHA PEL	2 mg/m ³ TWA (as Al, soluble compounds)
NIOSH REL	2 mg/m ³ TWA (as Al, soluble salts)

Eyes	Wear chemical safety goggles or face shield.
Skin	Wear chemical-resistant gloves and protective clothing.
Inhalation	For mist or aerosol applications (e.g., spray, atomization, pressure washing), use a NIOSH-approved half-face air-purifying respirator with combination acid gas / P100 cartridges. For dust exposure, an N95 or P100 particulate filter is acceptable. Ensure local exhaust ventilation.

Exposure limits sourced from NIOSH Pocket Guide and OSHA 29 CFR 1910.1000. Hazard classification from ECHA Classification and Labelling Inventory (CLP Annex VI).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White crystalline powder
Odor	Characteristic
Median Particle Size	Not Available
Particle Size Distribution	Not Available
Particle Shape	Not Available
Surface Area	Not Available
Dustiness	Not Available
Hygroscopicity	Not Available
pH	Not Available
Melting Point	770°C (1418°F)
Boiling Point	150°C (302°F)
Flash Point	Not Available
Vapor Pressure	Not Available
Specific Gravity	1.33
Solubility	Highly water soluble
Molecular Formula	Al ₂ O ₁₂ S ₃
Molecular Weight	342.2 g/mol

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Hazardous Reactions	None under normal processing conditions.
Conditions to Avoid	Heat, sparks, open flame, and incompatible materials.
Incompatible Materials	Strong acids, strong bases, reactive metals, water (for some concentrated forms).
Decomposition Products	May produce carbon oxides and other toxic fumes when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: See Section 2 for GHS hazard classification.

IARC	Not listed as carcinogen.
NTP	Not listed as carcinogen.
OSHA	Not listed as carcinogen.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Algae ErC50: > 25 mg/L (22 h, Aphanizomenon flos-aquae (cyanobacteria; static)); Daphnia EC50: 6.57 mg/L (48 h, Asellus aquaticus (isopod crustacean; renewal)); 72-h 4.37 mg/L)
Persistence	Aquatic toxicity strongly pH-dependent via aluminum speciation (free/hydrolyzed Al ³⁺ most toxic); endpoints vary with test pH
Bioaccumulation	Not Available
Mobility in Soil	Not Available

13. DISPOSAL CONSIDERATIONS

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

14. TRANSPORT INFORMATION

US DOT	UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Aluminum sulfate solution), 8, PG II
IMDG	UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Aluminum sulfate solution), 8, PG II
IATA/ICAO	UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Aluminum sulfate solution), 8, PG II
Marine Pollutant	No

15. REGULATORY INFORMATION

Regulatory listings not yet on file in this system; consult OSHA, EPA TSCA, EPCRA TRI, and California OEHHA directly.

SARA 311/312	See Section 2 for hazard classifications.
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16. OTHER INFORMATION

Revision Date: 06/26/2026

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